

Title (en)  
SITE 2 INSULIN ANALOGUES

Title (de)  
SITE-2-INSULINANALOGA

Title (fr)  
ANALOGUES D'INSULINE DE SITE 2

Publication  
**EP 2968473 A4 20161123 (EN)**

Application  
**EP 14764949 A 20140317**

Priority  
• US 201361798165 P 20130315  
• US 2014030387 W 20140317

Abstract (en)  
[origin: WO2014145593A2] An insulin analogue contains one or more modifications at a distinct protein surface comprising one or more of the residues at positions B13, B17, A12, A13, and/or A17. Formulations of the above analogues at successive strengths U-100 to U-1000 in soluble solutions at at least pH value in the range 6.8-8.0 either in the presence of zinc ions at a molar ratio of 2.2-10 zinc ions per six insulin analogue monomers or in the presence of fewer than 1 zinc ions per six insulin analogue monomers. Use of the above formulation in an insulin pump or insulin pump functionally integrated with a continuous glucose monitor and computer-based control algorithm as a closed-loop system. A method of treating a patient with diabetes mellitus comprises administering a physiologically effective amount of the insulin analogue or a physiologically acceptable salt thereof to a patient by means of intravenous, intraperitoneal, or subcutaneous injection.

IPC 8 full level  
**A61K 38/28** (2006.01); **C07H 21/04** (2006.01); **C07K 14/62** (2006.01)

CPC (source: EP IL US)  
**A61K 38/00** (2013.01 - IL); **A61P 3/10** (2017.12 - EP IL); **C07K 14/62** (2013.01 - EP IL US); **A61K 38/00** (2013.01 - EP US)

Citation (search report)  
• [YA] WO 2009132129 A2 20091029 - UNIV CASE WESTERN RESERVE [US], et al  
• [YA] WO 2008015099 A2 20080207 - NOVO NORDISK AS [DK], et al  
• [Y] WO 2010014946 A2 20100204 - UNIV CASE WESTERN RESERVE [US], et al  
• [A] WO 9200322 A1 19920109 - NOVO NORDISK AS [DK]  
• [XY] KRISTENSEN ET AL: "Alanine scanning mutagenesis of insulin", JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY, US, vol. 272, no. 20, 16 May 1997 (1997-05-16), XP002141113, ISSN: 0021-9258, DOI: 10.1074/JBC.272.20.12978  
• See references of WO 2014145593A2

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DOCDB simple family (publication)  
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**US 2014030387 W 20140317**; AU 2014232894 A 20140317; BR 112015023672 A 20140317; CA 2942524 A 20140317; CN 201480026485 A 20140317; EP 14764949 A 20140317; IL 24135715 A 20150909; JP 2016503388 A 20140317; KR 20157029605 A 20140317; US 201414774109 A 20140317